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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,774	05/14/2001	Wolf-Bernd Frommer	514413-3550.1	8393

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NEW YORK, NY 10151

EXAMINER

KALLIS, RUSSELL

ART UNIT	PAPER NUMBER
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1638

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DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,774

Applicant(s)

FROMMER, WOLF-BERND

Examiner

Russell Kallis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-88 is/are pending in the application.
- 4a) Of the above claim(s) 29 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-28, 31-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claims 1-20 and are cancelled. Claims 29-30 are withdrawn. Claims 59-88 are newly added and Claims 21-28 and 31-88 are examined.

Claim Rejections - 35 USC § 112

Claims 21-28 and 31-58 remain and new Claims 59-88 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 11/19/2002. Applicant's arguments filed 5/19/2003 have been considered but are not deemed persuasive.

Applicant's assertion that "the instant specification provides proper written description for Claim 1 of U.S. Patent 6,245,970 of which this application is a divisional and therefore shares the same specification" (response page 10-11) in no way addresses the lack of written description for the broadly claimed genus of polynucleotides encoding amino acid transporters isolated from a multitude of non-*Arabidopsis* plants. Further, Applicant has not amended the Claims to recite hybridization conditions according to the Written Description Guidelines.

Applicant asserts that amino acid transporters have been isolated from several species (response page 11 lines 22-25). At the time of filing and with the claimed priority taken into account amino acid transporters had not been isolated from several species. Furthermore, it is unclear whether the references cited on page 10 of the response actually teach the isolation and sequencing of genes rather than proteins. It appears that neither these references nor the

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specification provide any structural features (i.e. gene sequences) which are correlated with function (i.e. encoding a plant membrane amino acid transporter), as required by MPEP 2163.

Claims 54 remains rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 11/19/2002. Applicant's arguments filed 5/19/2003 have been considered but are not deemed persuasive. Applicant's assertion that one of skill in the art could easily make the yeast mutants does not fulfill the deposit requirements (response page 11 lines 15-21).

Claims 21-28 and 31-58 remain and new Claims 59-83 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 11/19/2002. Applicant's arguments filed 5/19/2003 have been considered but are not deemed persuasive.

Applicant asserts that the yeast mutant complementation system can be used to screen any plant genome for sequences encoding amino acid transporters (response page 11). Applicant has not addressed the enablement issues with respect to yeast mutants inhibited by toxic levels of amino acids and feedback inhibition of transport activity. Furthermore, Applicant's mere citation of other references on page 10 of the response, particularly in the absence of their submission, does not enable the instant specification. See *Genentech, Inc. v. Novo Nordisk, A/S*, 42 USPQ2d 1001, 1005 (Fed. Cir. 1997), which teaches that disclosure of a "mere germ of an idea does not

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constitute [an] enabling disclosure”, and that “the specification, not the knowledge of one skilled in the art” must supply the enabling aspects of the invention.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 21-28 and 31-58 remain and new Claims 59-88 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 5,719,043. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are broadly drawn to isolated DNA molecules encoding plant amino acid transporters including those hybridizing to *Arabidopsis* derived SEQ ID NO: 1 and 3, plasmids and host cells comprising said DNA molecules, plants transformed with plant amino acid transporter DNA having altered amino acid transporter activity and methods thereof. Thus, the embodiments of the inventions of Claims 1-22 of U.S. Patent 5,719,043 drawn to isolated DNA molecules comprising SEQ ID NOs: 1 and 3, products containing them, and methods of their use, fall within the scope of Claims 21-28, 31-53, and 55-88 of the instant application. This rejection is maintained for the

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reasons of record set forth in the Official action mailed 11/19/2002. Applicant's arguments filed 5/19/2003 have been considered but are not deemed persuasive.

Claims 21-28 and 31-58 remain and new Claims 59-88 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 6,245,970. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are broadly drawn to isolated DNA molecules encoding plant amino acid transporters including those hybridizing to *Arabidopsis* derived SEQ ID NO: 1 and 3, plasmids and host cells comprising said DNA molecules, plants transformed with plant amino acid transporter DNA having altered amino acid transporter activity and methods thereof. Thus, the embodiments of the inventions of Claims 1-25 of U.S. Patent 6,245,970 B1 fall within the scope of Claims 21-28 and 31-88 of the instant application. This rejection is maintained for the reasons of record set forth in the Official action mailed 11/19/2002. Applicant's intent to file a Terminal Disclaimer is noted. The rejection will be maintained until the receipt of a properly executed Terminal Disclaimer.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Claims 21-28 and 31-88 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest an isolated polynucleotide encoding a plant amino acid transporter and plants transformed with said polynucleotide.

Claims 21-28, 31-58 and Claims 59-83 are rejected.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kallis whose telephone number is (703) 305-5417. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0198.

Russell Kallis Ph.D.
August 10, 2003

DAVID T. FOX
PRIMARY EXAMINER
GROUP ~~180~~ 1638

A handwritten signature in black ink, appearing to read "David T. Fox", written over the printed name and title.